Merritt Parkway, North Street Bridge
Spanning the Merritt Parkway at the 5.67 mile mark
Greenwich
Fairfield County
Connecticut

HAER No. CT-70

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

Merritt Parkway, North Street Bridge

HAER No. CT-70

Location:	Spanning the Merritt Parkway at the 5.67 mile mark in Greenwich, Fairfield County, Connecticut at exit 31
	UTM: 18.614815.4549940 Quad: Glenville, Connecticut
Construction Date:	1937
Engineer:	Connecticut Highway Department
Architect:	George L. Dunkelberger, of the Connecticut Highway Department, acted as head architect for all Merritt Parkway bridges.
Contractor:	M. A. Gammino Construction Company Providence, Rhode Island
Present Owner:	Connecticut Department of Transportation Wethersfield, Connecticut
Present Use:	Used by traffic on North Street to cross the Merritt Parkway
Significance:	The bridges of the Merritt Parkway were predominately inspired by the Art Deco and Art Moderne architectural styles of the 1930s. Experimental forming techniques were employed to create the ornamental characteristics of the bridges. This, combined with the philosophy of incorporating architecture into bridge design and the individuality of each structure, makes them distinctive.
Historians:	Todd Thibodeau, HABS/HAER Historian Corinne Smith, HAER Engineer August 1992

For more detailed information on the Merritt Parkway, refer to the Merritt Parkway History Report, HAER No. CT-63.

LOCAL HISTORY

In July 1640, Daniel Patrick and Robert Feake, as agents of the New Haven Colony, purchased all lands between the Assmick and Potommuck brooks from local Indians. To protect their settlement Patrick and Feake signed allegiance to the Dutch at New Amsterdam, in 1642. Two years later, the Dutch raised a 130-man army and defeated the Petuquapean Indians at the site of the present village of Cos Cob in Greenwich.[1]

In 1650, a treaty was signed that defined the boundary line between Connecticut and New Amsterdam, removing Greenwich from Dutch control. Six years later, Greenwich again came under the jurisdiction of the New Haven Colony and started to prosper. In the next century, farmers settled throughout the almost fifty square miles of Greenwich. By 1756, there were nine districts in the town: Greenwich, Old Town, Horseneck, Cos Cob, North Street, Pecksland, Round Hill, Quaker Ridge, Stanwich, and Glenville. Trade with New York City prospered as ports developed at Cos Cob and the mouth of the Mianus River. The shoe-making industry developed at Banksville and Stanwich.[2]

With the arrival of the railroad in 1848, Greenwich commenced to change. The train reduced the time required to get to New York City. The town flourished as more and more New Yorkers traveled to Connecticut, seeking a haven from the noise and pollution of the city. By the 1920s, Greenwich was a well-established commuter suburb.[3]

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[1]"Development of Old Greenwich." Greenwich Press, 17 October 1935, p. 27.

[2]William E. Finch, "Greenwich--The History of a Border Town," (Manuscript, Greenwich Public Library Vertical File), 1-2.

[3]Finch, 6.

As farms gave way to residential homes, traffic continued to increase on the Post Road/U.S. Route 1. Local residents soon sought an alternative to the dangerous old highway. When Commissioner Macdonald suggested building an alternative road, Greenwich's residents quickly adhered to the idea. But conflicts developed as it came time to determine a specific route.

Originally eight different plans were put forth. This eventually became a contest between two routes. Macdonald wanted a northern route going through Round Hill, North Street, and Stanwich (this become known as the Greenwich Loop). Local residents, including Highway Superintendent P. L. Minor, wanted a more southerly route through Pecksland. They felt this route would be more convenient, less expensive to build and necessary in the near future. Furthermore, local leaders preferred destroying the lower valued properties along the Pecksland route than disrupting wealthy estates to the north. Macdonald threatened to start construction at the east end of the parkway to gain support for his plan. With this obstacle out of the way, work began at the New York state line on June 1, 1934.[4]

BRIDGE CONSTRUCTION HISTORY

Historically, North Street was the primary link between Banksville and the market at Greenwich. In the preliminary design of the Merritt Parkway, North Street was planned to have the

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[4]"Macdonald Sees No Road Solution," Greenwich Press, 10 September 1931, p. 1.
  "Highway Superintendent Minor Proposes Southern Route," Greenwich Press, 10 March 1932, p. 1.
  "Proposed Routes For the Merritt Highway," Greenwich Press, 10 March 1932, p. 8.
  "Route Goes Through Round Hill, Residents Upset," Greenwich Press, 24 March 1932, p. 1.
  "400 Hear Cross and Macdonald Discuss Highway," Greenwich Press, 16 November 1933, p. 1.

first exit. Local residents opposed having ramps at this interchange and formed the North Street Improvement Association. Their efforts were unsuccessful, but the commissioner promised not to open the Merritt Parkway until the roadway was finished past the town of Greenwich.[5]

The John Arborio Construction Company of Poughkeepsie, NY, received the contract to grade the Merritt Parkway from Round Hill Road to Taconic Road, in Greenwich (ConnDot project #180-14). While the North Street Bridge is located within this section of the Merritt, the grade separation and bridge contract went to the M. A. Gammino Construction Company of Providence, RI (ConnDot project #180-39).[6] The bridge cost $23,042 and was completed in 1937. The paving work for this region of the Merritt extended from Round Hill Road to Taconic Road. This contract was awarded to the A. I. Savin Company of East Hartford, CT (ConnDot project #180-91). In 1956, the North Street Bridge had its ramps lengthened and widened. Since then it has received little maintenance.[7]

BRIDGE DESCRIPTION

The North Street Bridge is a single-span, reinforced- concrete, barrel-type rigid-frame bridge spanning 71'-7-1/8" with a clear roadway 50' wide. Parallel wing walls, 34" long, form the

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[6]Contract Card File, Map File and Engineering Records Department, Connecticut Department of Transportation, Wethersfield, CT.

[7]North Street Bridge, DOT #697; Bridge Maintenance File, Engineering Department, Connecticut Department of Transportation, Newington, CT.

approach for the underpass. The Merritt Parkway travels under the bridge at a 30° skew with a clear roadway of 60'.

The rigid-frame design allows the engineer to decrease the structural material at the center of the span, thus forming an arched opening. (See the Merritt Parkway History Report, HAER No. CT-63, for a more detailed description of the rigid frame.) The intrados of the span rises 3'-6" from the springline to the crown, while the extrados is almost horizontal from the knee to the crown. The frame thickness at the crown is 22-1/2". The outside of the knee forms a right angle, but the reinforcing steel is curved with a 3'-6" radius. The inside of the knee is a corner with an obtuse angle. The frame leg height provides approximately 14'-7" clear above the Merritt Parkway pavement. The frame leg thickness increases from approximately 44" at the base to 66" at the knee. The exposed face of the leg remains vertical, and the hidden face slopes away from the roadway.

The drawings specify that, as individual elements, the frame and wing walls were to be poured monolithically above the reinforced-concrete footings. The pylon at the main pier is articulated by several small steps outward in the plane of the face. A construction joint occurs in one of the pylon's vertical corners to separate the frame leg from the wing wall. Expansion joints, 1/2" wide, filled with cork and 16-ounce copper flashing were placed between the frame and the wing walls.

The concrete is rusticated to imitate ashlar masonry at the wing walls and frame legs and voussoirs over the arched span. The pylon faces are smooth. The simple poured-in-place balustrade is continuous across the wing walls and bridge span.

BIBLIOGRAPHY

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Company, 1881.

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Library Vertical File.

Greenwich Press. 1931-1935.

------. Contract Card File. Map File and Engineering Department, Connecticut Department of
Transportation, Wethersfield, CT. This includes construction drawings, copies of which are
in the HAER field records.

------. Bridge Maintenance File. Engineering Department, Connecticut Department of
Transportation, Newington, CT.

PROJECT INFORMATION

This recording project was undertaken by the Historic American Buildings Survey and the Historic American Engineering Record (HABS/HAER) Division of the National Park Service, Robert J. Kapsch, Chief. The Merritt Parkway recording project was sponsored and funded by the Connecticut Department of Transportation (ConnDot) and the Federal Highway Administration.

The fieldwork, measured drawings, historical reports and photographs were prepared under the general direction of Eric N. DeLony, HAER Chief, and Sara Amy Leach, HABS Historian.

The recording team consisted of Jacqueline A. Salame (Columbia University), architect and field supervisor; Mary Elizabeth Clark (Pratt Institute) and B. Devon Perkins (Yale University), architectural technicians; Joanne McAllister-Hewlings (US/ICOMOS-Great Britain, University of Sheffield), landscape architect; Corinne Smith (Cornell University), engineer; Gabrielle M. Esperdy (City University of New York) and Todd Thibodeau (Arizona State University), historians; and Jet Lowe, HAER photographer.